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| 10/791,748      | 03/04/2004  | Takuya Sato          | 250015US90          | 5255             |

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EXAMINER

YOUNG, JANELLE N

ART UNIT PAPER NUMBER

2618

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/791,748

Applicant(s)

SATO ET AL.

Examiner

Janelle N. Young

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano (US Patent 2003/0153272) and further in view of Persson et al. (US Patent 6823193).

As for claim 1, Takano teaches a mobile communications system, comprising a plurality of base stations, and a radio controller which controls each of said base stations (Fig. 1; Page 1, Para 0011; and Page 4, Para 0058, 0061, 0068 & 0070 of Takano),

wherein each said base station comprises,

a transmission power value reporting unit, configured to report to said radio controller a downlink transmission power value and a communications quality of a downlink from said base station itself to a mobile station (Page 4, Para 0059 & 0069; Page 5, Para 0073 & 0075; and Page 6, Para 0090 & 0092 of Takano); and,  
said radio controller comprises:

a cell-determining unit configured to determine, out of cells each serviced by one of said base stations, a cell having a good communications quality (Page 9, Para 0125-0130 of Takano);

a reference numbers; which read on claimed reference-value, determining unit configured to determine, as a reference value, a downlink transmission power value of the base station which services the determined cell (Page 5, Para 0083-0086; Page 6, Para 0095; Page 7, Para 0107; Page 8, Para 0115; Page 9, Para 0125-0130 & 0136; and Page 10, Para 0148 of Takano); and

an offset-value setting unit configured to set, based on said communications quality, an offset value corresponding to each said base station (Page 1, Para 0007 and Page 9, Para 0137-0139 of Takano).

What Takano does not explicitly teach is a mobile communications system, comprising a plurality of base stations, and a radio controller which controls each of said base stations that comprises of target values.

However Persson et al. teaches a mobile communications system, comprising a plurality of base stations, and a radio controller which controls each of said base stations that comprises of said radio controller further comprising:

a target-value setting unit configured to set, based on said reference value and said corresponding offset value, a target value corresponding to each said base station and a target-value reporting unit configured to report said target value to said base station; and (Col. 9, lines 1-13 & 55-65 of Persson et al.);

each said base station further comprises:

a transmission power control unit configured to control the transmission power value of the downlink from said base station itself to said mobile station so as to cause the transmission power value to approach said target value (Col. 1, lines 26-37; Col. 3, lines 34-55; and Col. 6, lines 5-20 of Persson et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a downlink transmission power synchronization, as taught by Persson et al., in the quality threshold setting and communication controller of Takano, because Takano already teaches transmission power is controlled in base stations so that the minimum transmission power required for ensuring reception quality required at mobile stations while reducing interference with other channels. The transmission power control is closed-loop control and measured reception quality is compared with predetermined targeted quality and a transmit power control (TPC) (Col. 5, lines 3-12 of Takano).

The motivation of this combination would be the effect of the quality threshold setting method in a cellular system, as taught by Takano in Page 1, Para 0002, so channels using the same frequency band and a radio wave wouldn't interfere with another radio wave used in another channel. In the outer control loop, the RNC monitors signal quality reports provided from the base stations, including SIR values detected by the mobile station for signals received from both base stations and actual transmit power levels of the base station transmission to the mobile station. (Col. 6, lines 21-44 of Persson et al.). The incorporation of downlink transmission power

synchronization with quality threshold setting and communication controller would decrease interference degrades of a desired wave's reception quality and reduce the chance in the disconnection of a channel.

Regarding claim 2, see explanation as set forth regarding claim 1 (system claim) because the claimed radio controller which controls a plurality of base stations configuring a mobile communications system would perform the mobile communications system steps.

As for claim 3, Takano teaches a radio controller which controls a plurality of base stations configuring a mobile communications system, wherein the offset-value setting unit sets said offset value so as to cause said reference value to decrease with a larger degree of degradation in the communications quality of the cell serviced by said base station (Page 1, Para 0004, 0009, & 0013-0017; Page 2, Para 0018-0019 & 0022; Page 5, Para 0082; Page 7, Para 0102-0103; Page 8, Para 0111-0113; Page 8, Para 0123; Page 9, Para 0133-0134; Page 10, Para 0144-0146; and Page 11, Para 0155 of Takano).

As for claim 4, Takano teaches a radio controller which controls a plurality of base stations configuring a mobile communications system, wherein the offset-value setting unit sets the offset value for each said base station, based on a difference between the communications quality of the cell serviced by said base station, and the communications quality of the cell determined by said cell-determining unit (Page 1, Para 0007 and Page 9, Para 0137-0139 of Takano).

As for claim 5, Takano teaches a radio controller which controls a plurality of base stations configuring a mobile communications system, wherein the offset-value setting unit, in case of more than one base station, which services a cell other than said cell having the good communications quality determined by said cell-determining unit, existing, sets said offset value for each of said more than one base station to be identical (Page 1, Para 0007 and Page 9, Para 0125-0130 & 0137-0139 of Takano).

As for claim 6, Takano teaches a radio controller which controls a plurality of base stations configuring a mobile communications system, further comprising a table indicating a corresponding relationship between said communications quality and said offset value, wherein said offset-value setting unit sets, based on said table, the offset value for each said base station (Page 1, Para 0007 and Page 9, Para 0125-0130 & 0137-0139 of Takano).

As for claim 7, Persson et al. teaches a radio controller which controls a plurality of base stations configuring a mobile communications system, wherein the offset-value setting unit, in case of a secondary scrambling code being used in the communications using said downlink, causes an increase of the offset value for a base station using said downlink (Col. 1, line 66-Col. 2, line 9; Col. 2, lines 19-39; and Col. 8, lines 29-67 of Persson et al.).

As for claim 8, Persson et al. teaches a radio controller which controls a plurality of base stations configuring a mobile communications system, further comprising a target-value increasing unit configured, in a case where a secondary scrambling code is used in the communications using said downlink, to cause an increase of the target

value corresponding to a base station using said downlink (Col. 8, line 50-Col. 9, line 27 and Col. 8, lines 55-65 of Persson et al.).

Regarding claim 9, see explanation as set forth regarding claim 1 (system claim) because the a base station which configures with one or more other base stations in a mobile communications system would perform the mobile communications system steps.

As for claim 10, Takano teaches a base station which configures with one or more other base stations a mobile communications system, further comprising:

a downlink communications quality obtaining unit configured to obtain the communications quality, reported from said mobile station, of said downlink (Page 1, Para 0007; Page 2, Para 0027; Page 3, Para 0030; Page 7, Para 0103; Page 8, Para 0112; and Page 11, Para 0162 of Takano); and

a downlink communications quality reporting unit configured to report the communications quality of said downlink to said radio controller (Page 7, Para 0105 and Page 8, Para 0114 of Takano).

As for claim 11, Persson et al. teaches a base station which configures with one or more other base stations a mobile communications system, further comprising:

a target-value increasing unit configured to cause to increase, in a case where a secondary scrambling code is used in the communications using said downlink, the target value and wherein said transmission power control unit controls the transmission power value of the downlink from said base station itself to said mobile station so as to cause the transmission power value to



approach said target value caused to be increased by said target-value increasing unit (Col. 1, line 66-Col. 2, line 39 and Col. 9, lines 1-27 of Persson et al.).

Regarding claim 12, see explanation as set forth regarding claim 1 (system claim) because the claimed method of controlling a plurality of base stations and a radio controller which controls said base stations in a mobile communications system would perform the mobile communications system steps.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle N. Young whose telephone number is (571) 272-2836 on Monday through Friday: 8:30 am through 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JNY  
September 28, 2006

 9/30/06  
QUOCHIEN B. VUONG  
PRIMARY EXAMINER